AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions and listings of the claims in this application.

Listing of the Claims:

1. (Original) Method for producing radially perforated, cylindrical propellant tubes (1, 23, 31), characterized in that the respective propellant tube (1, 23, 31), when fixed and centred between its own open ends, is perforated in stages in a large number of consecutive perforation operations by means of one or more movable perforation pins (13) capable of being displaced radially in a pin die (10) relative to the propellant tube towards and at least as far as its main part through the wall of the same, which perforation pins are returned after every perforation to their position before perforation, in which position the pin die (10, 20-22) and the propellant tube (1, 23, 31) are subjected to relative displacement so that the pins, on the next occasion on which they are activated, perforate a previously unprocessed area of the propellant tube, and in conjunction with which the sum of all the perforations after the operation is complete gives an all-over perforation with the desired e-dimension between all the perforations.

2. (Original) Method in accordance with Claim 1, characterized in that the relative displacement of the pin die (10, 20-22) and the propellant tube (1, 23, 31) between two perforation stages axially, radially or both of these, is controlled in such a way that all the perforations, after the perforation operation has been completed in its entirety, will lie at a distance from one another equivalent to the desired e-dimension for the intended application of the propellant tube.

3. (Currently amended) Method in accordance with ~~Claims 1 or 2~~ Claim 1, characterized in that, between the perforation stages, the pin die is displaced in a linear fashion along the entire length of the propellant tube until such time as the whole of that length is

covered by perforations, after which the propellant tube is rotated about its longitudinal axis through the angle that corresponds to the desired e-dimension, at the same time as which the longitudinal position of the pin die is corrected so that new, unprocessed material faces towards the pin die, and any additional perforations will then lie at an e-dimension distance from the previously executed perforations, after which this previously unprocessed part of the propellant tube is perforated in a corresponding fashion followed by a further rotation and longitudinal correction of the propellant tube until such time as it has been perforated in its entirety with the desired e-dimension distance.

4. (Currently amended) Method in accordance with ~~Claims 1 or 2~~ Claim 1, characterized in that the feed stage between the perforation stages affecting the propellant tube (1, 23, 31) and the pin die (10, 20-22, 24) is distributed by a rotation of the propellant tube and a lateral feed of the pin die that are selected in such a way that the perforation of the propellant tube will run in a spiral path around it from its one end to its other end, after which a new spiral path at a distance of one e-dimension from the first begins, until the whole of the propellant tube has been covered by perforations at distance of one e-dimension from one another.

5. (Currently amended) Method in accordance with ~~Claims 1 or 2~~ Claim 1, characterized in that the mutual relative feed of the pin die and the propellant tube is executed by a controlled rotation of the propellant tube until one revolution has been covered by perforations, after which the pin die is fed for one e-dimension to permit the execution of the next perforation revolution.

6. (Currently amended) Method in accordance with ~~Claims 1-4~~ Claim 1, characterized in that a pin die with several pins arranged in a row after one another at an e-dimension distance from one another in the longitudinal direction of the propellant tube is used as the pin die, in conjunction with which the longitudinal feed of the pin die in the longitudinal direction of the propellant tube between each perforation stage is equivalent to the number of e-dimensions covered by the pins in the die.

7. (Currently amended) Method in accordance with ~~Claims 1-6~~ Claim 1, characterized in that the feed of the pin die and/or the rotation of the propellant tube is/are controlled by gauge blocks, against which fixed abutments come into contact.

8. (Currently amended) Method in accordance with ~~Claims 1-6~~ Claim 1, characterized in that the feed of the pin die and the rotation of the propellant tube are controlled by a microcomputer.

9. (Currently amended) Arrangement for the execution of the method in accordance with ~~one or other of Claims 1-8~~ Claim 1, for the perforation of propellant tubes (1, 23, 31) with the perforations distributed uniformly over the entire propellant tube at an e-dimension distance from one another adapted for the propellant having regard for its rate of combustion and its intended application, characterized in that, in the first place, this involves a fixing device (4-9) intended for the fixing and axial alignment of propellant tubes (1, 23, 31) preferably comprising conical end guides (3, 4) capable of displacement relative to one another and capable of being introduced into the open ends of the respective propellant tube for centring the propellant tube and for clamping the propellant tube, and, in the second place, at least one pin (13) mounted in a pin die (10) and capable of displacement in the same to and from the outer surface of the respective propellant tube in its clamped position and through at least the major part of its wall, in conjunction with which the aforementioned pin die (10) and the respective propellant tube (1, 23, 31) are connected together in such away as to permit movement, so that, after each and every one of the perforations of the wall of the propellant tube by the pins (13) and after the pins have been returned to the position before the perforation operation, the pin die and the propellant tube are displaced relative to one another so that new propellant material is exposed under the pin die for its next perforation stage.

10. (Original) Arrangement in accordance with Claim 9, characterized in that a plurality of pin dies arranged around the clamping position of the propellant tube are, at the same time, so arranged that they perforate the propellant tube with their pins arranged therein from mutually opposing directions.

11. (Currently amended) Arrangement in accordance with ~~Claims 9 or 10~~ Claim 9, characterized in that it comprises support rollers (17, 18), against which the clamped propellant tube makes contact in order to prevent downward deflection.

12. (Currently amended) Arrangement in accordance with ~~Claims 9-11~~ Claim 9, characterized in that an internal abutment (19), which does not obstruct the passage of the pins in the pin die through the propellant tube, is arranged on the inside of the propellant tube.

13. (Original) Arrangement in accordance with Claim 12, characterized in that the internal abutment (19) is a tube so arranged as to hold the propellant tube horizontally.

14. (New) Method in accordance with Claim 2, characterized in that, between the perforation stages, the pin die is displaced in a linear fashion along the entire length of the propellant tube until such time as the whole of that length is covered by perforations, after which the propellant tube is rotated about its longitudinal axis through the angle that corresponds to the desired e-dimension, at the same time as which the longitudinal position of the pin die is corrected so that new, unprocessed material faces towards the pin die, and any additional perforations will then lie at an e-dimension distance from the previously executed perforations, after which this previously unprocessed part of the propellant tube is perforated in a corresponding fashion followed by a further rotation and longitudinal correction of the propellant tube until such time as it has been perforated in its entirety with the desired e-dimension distance.

15. (New) Method in accordance with Claim 2, characterized in that the feed stage between the perforation stages affecting the propellant tube (1, 23, 31) and the pin die (10, 20-22, 24) is distributed by a rotation of the propellant tube and a lateral feed of the pin die that are selected in such a way that the perforation of the propellant tube will run in a spiral path around it from its one end to its other end, after which a new spiral path at a distance of one e-dimension from the first begins, until the whole of the propellant tube has been covered by perforations at distance of one e-dimension from one another.

16. (New) Method in accordance with Claim 2, characterized in that the mutual relative feed of the pin die and the propellant tube is executed by a controlled rotation of the propellant tube until one revolution has been covered by perforations, after which the pin die is fed for one e-dimension to permit the execution of the next perforation revolution.

17. (New) Method in accordance with Claim 2, characterized in that a pin die with several pins arranged in a row after one another at an e-dimension distance from one another in the longitudinal direction of the propellant tube is used as the pin die, in conjunction with which the longitudinal feed of the pin die in the longitudinal direction of the propellant tube between each perforation stage is equivalent to the number of e-dimensions covered by the pins in the die.

18. (New) Method in accordance with Claim 3, characterized in that a pin die with several pins arranged in a row after one another at an e-dimension distance from one another in the longitudinal direction of the propellant tube is used as the pin die, in conjunction with which the longitudinal feed of the pin die in the longitudinal direction of the propellant tube between each perforation stage is equivalent to the number of e-dimensions covered by the pins in the die.

19. (New) Method in accordance with Claim 4, characterized in that a pin die with several pins arranged in a row after one another at an e-dimension distance from one another in the longitudinal direction of the propellant tube is used as the pin die, in conjunction with which the longitudinal feed of the pin die in the longitudinal direction of the propellant tube between each perforation stage is equivalent to the number of e-dimensions covered by the pins in the die.

20. (New) Method in accordance with Claim 2, characterized in that the feed of the pin die and/or the rotation of the propellant tube is/are controlled by gauge blocks, against which fixed abutments come into contact.